Prescribed material:

Keet, C.M. (2020). An Introduction to Ontology Engineering.

DeBellis, M. (2021). A Practical Guide to Building OWL Ontologies Using Protégé 5.5 and Plugins.

**Outcomes**

After completing this module, you should be able to:

• Demonstrate an understanding of ontologies and their uses

• Critically analyse and evaluate existing ontologies

• Demonstrate an understanding of techniques and methodologies for developing ontologies.

• Use ontology development tools to develop new ontologies and adapt existing ones.

To meet these outcomes, you will cover the following topics:

* Ontologies, terminologies, knowledge representation
* Uses of ontologies
* Semantic Web knowledge
* Semantic interoperability knowledge
* Knowledge of the logical foundations of OWL
* Ontology reasoning
* Bottom-up and top-down development of ontologies
* Using tools for developing ontologies
* Ontology quality and debugging
* Knowledge of domain and foundational ontologies

**The outcomes for the module are covered in six lessons:**

* [Lesson 1: Definition of ontologies, uses of ontologies, and ontology languages](https://mymodules.dtls.unisa.ac.za/mod/lesson/view.php?id=850563).
* [Lesson 2: The Protégé ontology development environment and the Pizza ontology](https://mymodules.dtls.unisa.ac.za/mod/lesson/view.php?id=850761).
* [Lesson 3: Ontology development and foundational ontologies](https://mymodules.dtls.unisa.ac.za/mod/lesson/view.php?id=850810).
* [Lesson 4: Domain ontologies and ontology interoperability examples](https://mymodules.dtls.unisa.ac.za/mod/lesson/view.php?id=855196).
* [Lesson 5: Linking a domain ontology to a foundational ontology](https://mymodules.dtls.unisa.ac.za/mod/lesson/view.php?id=855208).
* [Lesson 6: Representing knowledge expressed as text as an ontology](https://mymodules.dtls.unisa.ac.za/mod/lesson/view.php?id=855282).

**Assessment**:

* COS4840 Ontology Engineering is a continuous assessment module.
* All assessments count towards the final mark for the year.
* There is no formal exam:
  + Two assessments are in the form of practical and theory test
* There is no supplementary exam
* The following formal assessments make up the final mark:
  + 2 theory assignments (compulsory).
  + 1 practical assignment (compulsory).
  + 1 formal test with both practical and theory components.
  + 1 blogging assessment.

**Assessment weights**:

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| --- | --- | --- |
| Assessment | Type | Weight |
| 1 | Theory assignment | 15% |
| 2 | Theory assignment | 20% |
| 3 | Practical assignment | 25% |
| 4 | Theory test | 15% |
| 5 | Practical test | 15% |
| 6 | Blogging exercises | 10% |